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The final year of the University of Michigan Human Breast Cell/Tissue Bank and Data base has been dedicated to providing investigators from around the country and internationally with the cells and tissues we have banked and with new breast cancer cell lines developed in our lab. A World Wide Web page, which contains an on-line order form that allows investigators to request the cells or tissues that suits their needs, has been visited over 1000 times. Many investigators have made use of the on-line order form for requests for breast cancer cells and tissues. Thus, over the past year, our core has distributed frozen human breast cancer cells, breast cancer cell lines, and paraffin embedded and frozen histologic sections from breast cancer specimens to many different laboratories. Also during this year, a complete genetic analysis of the new breast cancer cell lines was carried out and that data are available to investigators using the cell lines. Goals for the upcoming year are to improve the visibility of this resource in order to increase the number of requests that we receive and fill.

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FOREWORD

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____ In the conduct of research involving hazardous organisms, the investigator(s) adhered to the CDC-NIH Guide for Biosafety in Microbiological and Biomedical Laboratories.

Stephen P. Ethier 12-3-98

PI - Signature Date

Stephen Ethier, Ph.D.

Human Breast Cancer Cell/Tissue Bank and Database

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INTRODUCTION

The major goal of the work that has been supported by our DOD infrastructure grant has been to develop a human breast cancer cell/tissue bank and data base in order to facilitate the distribution of fresh breast cancer specimens to breast cancer researchers here at the University of Michigan, and to scientists across the country and in other countries as well. In developing this resource we have provided many different kinds of research materials to breast cancer researchers. These materials include; histologic sections of normal and neoplastic breast tissue, frozen sections of breast cancer specimens, touch preps of fresh specimens, frozen cells isolated from breast cancer specimens, and novel human breast cancer cell lines developed in our laboratory as part of the infrastructure grant-supported work. In addition to these specimens, we have provided researchers with clinical data that match the specimens.

Thus, we have developed a unique human breast cell/tissue bank and data base that is providing important breast cancer cells and tissues to many cancer researchers.

BODY

Over the past four years, we have developed a core facility that has been directed toward the accomplishment of several specific tasks. These tasks are as follows:

Task 1. Establish logistic methods for insuring that every human breast cancer specimen that has tissue remaining following evaluation by the Surgical Pathologist is routed to the Cancer Biology laboratory for tissue preparation, cell isolation and cyropreservation in the cell bank.

Task 2. Establish methods for histologic evaluation of parameters not ordinarily evaluated for human breast cancer specimens, for all specimens that yield cells that are stored in the tissue bank. These include immunohistochemical evaluation of expression levels of p53 protein, EGFR receptor and HER-2/neu receptor.

Task 3. Establish logistic methods for routine blood drawing of all breast cancer patients whose cells are preserved in the bank, in order to isolate and immortalize lymphocytes from these patients.

Task 4. Establish a computerized data base for all patients whose cells are currently stored in the cell bank and for all future patients whose cells/tissues are banked. The data base will contain all pertinent family history data, all data obtained from histopathologic evaluation of the breast cancer specimen, the location and status of the patients' cells and tissues stored in the bank. Experimental data obtained by individual investigators using banked samples will also be entered

into the data base. The data base will be set-up in a way that allows investigators to access patient data without compromising the privacy and confidentiality of the patient.

Task 5. Set up and implement the administrative plan for distribution of cells and tissues stored in the bank to other investigators at the University of Michigan as well as other Cancer Centers throughout the mid-west and the country.

As we have indicated in previous progress reports, we have successfully accomplished all of the tasks outlined above. We now routinely bank breast cancer specimens and collect clinical data from each of the patients. These specimens are available to researchers as sections cut from paraffin blocks, as frozen sections, and as dissociated cells that are frozen immediately after their isolation. In addition, we have over the years, developed a panel of 12 new human breast cancer cell lines that we have established from patient specimens. These cell lines have been well characterized at the cellular and molecular level and have been made available to researchers as part of this core. Early in the development of this core, we set up a home page on the World Wide Web that researchers can use to find out what is available in our cell/tissue bank and to make requests for cells and tissues. The URL for this site is, http://p53.cancer.med.umich.edu/umbnkdb.html. This web page is linked to other web pages where detailed instructions on how to culture our breast cancer cell lines can be found, as well as to other breast cancer-related web sites.

The appendix material lists the requests for tissues and breast cancer cells that have been filled during the past year. As can be seen from these tables, our core facility continues to be very active and we are distributing breast cancer cells and tissues all over the world.

CONCLUSIONS

The DOD infrastructure grant originally awarded four years ago did allow us to set up a core facility that resulted in the banking and distribution of breast cancer cells, and resulted in the development of a new panel of human breast cancer cell lines. It is the latter aspect of our core which distinguishes us from other similar facilities. Indeed, over the four years, we have distributed more breast cancer cell lines than any other type of breast specimen.

It is unfortunate that the DOD did not allow for renewal of successful core facilities. As we indicated in our original proposal, the University of Michigan Cancer Center will continue to support this core facility for the time being. However, it is unclear how long the personnel costs for maintaining such a core can be maintained, even as we now begin to charge researchers for cells and tissues that they request. Nevertheless, this grant mechanism have been successful and has accomplished the major goals that were set forth at the beginning of the project.

Appendix

1. Summary of disbursement of tissues by Pathology
2. Summary of disbursement of cells and cell lines by Cancer Biology
3. List of investigators receiving cells or tissues

Tumor Bank

From 10/1/97 until 8/10/98, we have sent out the following:

Cell Lines:	163 different samples
Human Mammary Epithelial Cells:	31 different samples
Frozen Cancer Cells:	25 different samples
Recipients:	25 different people

Requests fulfilled by Pathology:

Ca (H&E) (Cancer specimen on a Haematoxylin & Eosin slide):	93
nl (H&E) (Normal specimen on a Haematoxylin & Eosin slide):	44
Ca (+) (Cancer specimen on a silane slide):	476
nl (+) (Normal specimen on a silane slide):	112
Ca (BT):	-0-
Frozen Section of a breast cancer tumor:	168

PRINCIPAL INVESTIGATORS FOR TISSUE BANK REQUESTS 1998

Last Name	First Name	Institution	City	State	Country
Aldaz	C. Marcelo	U of Texas Anderson Cancer Ctr	Smithville	TX	USA
Boxhorn	Heike	U of PA Dept. of Hem/Onc	Philadelphia	PA	USA
Burton	Jack	Garden State Cancer Center	Belleville	NJ	USA
Casey	Graham	The Cleveland Clinic Foundation	Cleveland	OH	USA
Chin (x 2)	Suet-Feung	Addenbrooke's Hospital	Cambridge		England
Gorey	Tom	UCD-Mater Misericordiae Hosp.	Dublin		Ireland
Gray	Joe	U of CA Cancer Genetics Prog.	San Francisco	CA	USA
Hoover	Kevin	Univ. of California	Irvine	CA	USA
Jett	Marti	Walter Reed Army Inst. Res.	Washington	DC	USA
Kurt (x 4)	Robert	Cellular Immunology	Portland	OR	USA
Lee	Marietta	NY Medical College	Valhalla	NY	USA
MacCallum	Donald	U/M	Ann Arbor	MI	USA
Ostrand-Rosenberg	Suzanne	U of Maryland Baltimore County	Baltimore	MD	USA
Power	David	St. Vincent's Hospital	Fitzroy	Victoria	Australia
Raizis	Anthony	Christchurch School of Med	Christchurch		New Zealand
Reed	Steven	The Scripps Research Inst.	LaJolla	CA	USA
Rottenberg	Susan	U of Maryland Baltimore County	Baltimore	MD	USA
Schutte	Mieke	Daniel den Hoed Cancer Clinic	Rotterham		The Netherlands
Scovell	William	Bowling Green State Univ.	Bowling Green	OH	USA
Shiekh	Saeed	NIH	Bethsda	MD	USA
Shureiqui	Imad	U/M	Ann Arbor	MI	USA
Spies	Thomas	Fred Hutchinson Cancer Res Ctr	Seattle	WA	USA
Tai Wai	Wong	Bristol-Myers Squibb Pharm.Res.	Princeton	NJ	USA
Tamura (x 2)	Richard	Seattle Biomed Res. Inst.	Seattle	WA	USA
Traish	Abdulmaged	Boston U Med School	Boston	MA	USA
Vadgama	Jay	Charles Drew University	Los Angeles	CA	USA
Weitzman (x 2)	Rafael	M. Sinai School of Medicine	New York	NY	USA
Welch	Danny	Penn State U Coll of Medicine	Hershey	PA	USA
Wu (x 3)	Inmin	Children's Hospital	Boston	MA	USA
Zaichowski	Deb	Berlex Biosciences	Richmond	CA	USA
Zhou	Mingdong	St. Vincent Hospital	Darlinghurst	Syndney	Australia

PRINCIPAL INVESTIGATORS FOR TISSUE BANK REQUESTS 1996-1997

Last name	First name	Institution	City	State	Country
Atkins	Kevin	University of Michigan	Ann Arbor	MI	USA
Clevenger	Charles	University of Pennsylvania	Philadelphia	PA	USA
Dorfman	David	Harvard Brigham and Women's Hospit	Boston	MA	USA
Gudas	Jean	Amgen, Inc.	Thousand Oaks	CA	USA
Hoover	Kevin	University of California	Irvine	CA	USA
Jaken	Susan	Waj Cell Science Center	Lake Placid	NY	USA
Kahan	Zsuzsanna	Tulane University Medical Center	New Orleans	LA	USA
Kallioniemi	Olli	National Center for Human Genome R	Bethesda	MD	USA
Kapoun	Ann	Children's Hospital Los Angeles	Los Angeles	CA	USA
Karnik	Pratima	Cleveland Clinic	Cleveland	OH	USA
Kefalides	Nicholas	University of Pennsylvania	Philadelphia	PA	USA
Kurnit	David	University of Michigan	Ann Arbor	MI	USA
Kurt	Robert	Earle Chilles Research Institute	Portland	OR	USA
Lowe	Scott	Cold Spring Harbor Laboratory	Cold Spring Harb	NY	USA
Merajver	Sofia	University of Michigan	Ann Arbor	MI	USA
Moses	Marsha	Children's Hospital-Harvard University	Boston	MA	USA
Nakshatri	Harikrishna	Indiana University	Indianapolis	IN	USA
Niedbala	Michael	Bayer Research Center	West Haven	CT	USA
Ostrand-Rosenb	Suzanne	University of Maryland	Baltimore	MD	USA
Rotenberg	Susan	Queens College	Flushing	NY	USA
Sarraf	Pasha	Dana Farber Cancer Institute	Boston	MA	USA
Shackleford	Gregory	Children's Hospital Los Angeles	Los Angeles	CA	USA
Strayer	David	Thomas Jefferson University	Philadelphia	PA	USA
Svoboda-Newma	Suzette	University of Michigan	Ann Arbor	MI	USA
Weigel	Ron	Stanford University	Stanford	CA	USA
Welch	Danny	Pennsylvania State Medical College	Hershey	PA	USA
Wong	Tai Wai	Bristol Myers Quibb Pharm Res Institut	Princeton	NJ	USA
Woodruff	Teresa	Northwestern University	Chicago	IL	USA
Wu	Inmin	Children's Hospital-Harvard University	Boston	MA	USA
Xian-Feng	Zhang	Harvard University	Charlestown	MA	USA
Yazdi	Youseph	University of Texas at Austin	Austin	TX	USA
Yu	Ben	Henry Ford Health System	Detroit	MI	USA
Zucchi	Ileana	Istituto Technologie Biomediche Avanz	Milano		ITALY

PRINCIPAL INVESTIGATORS FOR TISSUE BANK REQUESTS 1995-1996

Name	Department	Institution	City/State/Country
Aldaz, Marcelo		U. of Texas MD Anderson Can	Houston, Texas
Asch, Bonnie		Roswell Park Cancer Institute	Buffalo, NY.
Cohen, Stanley	Dept. of Genetics	Stanford Medical Center	Santa Cruz, CA.
Cohen, Stanley	Dept. of Genetics	Stanford Medical Center	Santa Cruz, CA.
Couch, Fergus		U. of Penn Medical Center	Phila., PA.
Gabrielson, Edward		Johns Hopkins Pathology Res	Baltimore, MD.
Gelman, Irwin		Mt. Sinai School of Medicine	New York City, NY.
Gelman, Irwin		Mt. Sinai School of Medicine	New York City, NY.
Gottardis, Marco		Ligand Pharmaceuticals	San Diego, CA.
Kurnit, David	Dept. of Pediatrics	University of Michigan	Ann Arbor, MI.
Merajver, Sofia	Dept of Hem/Onc.	University of Michigan	Ann Arbor, MI.
Merajver, Sofia	Dept of Hem/Onc.	University of Michigan	Ann Arbor, MI.
Parsons, Sarah J	Dept. of Microbiolo	UVA Health Science Center	Charloettesville, VA.
Parsons, Sarah J	Dept. of Microbiolo	UVA Health Science Center	Charloettesville, VA.
Petty, Liz	Dept. of Internal M	University of Michigan	Ann Arbor, MI.
Petty, Liz	Dept. of Internal M	University of Michigan	Ann Arbor, MI.
Petty, Liz	Dept. of Internal M	University of Michigan	Ann Arbor, MI.
Petty, Liz	Dept. of Internal M	University of Michigan	Ann Arbor, MI.
Rotenberg, Susan		Queens College, CUNY	New York
Ryan, Patricia		Genetic Therapy	Gaithersburg, MD.
Ryan, Patricia		Genetic Therapy	Gaithersburg, MD.
Ryan, Patricia		Genetic Therapy	Gaithersburg, MD.
Salomon, David		NCI, NIH	Bethesda, MD.
Silverman, Gary		Childrens' Hospital	Boston, MA.
Silverstein, Gary	Dept. of Biology	Sinsheimer Laboratories (U of	Santa Cruz, CA.
Strayer, David		Thomas Jefferson Medical Coll	Phila., PA.
Welsh, JoEllen		Alton Jones Cell Science Cent	Lake Placid, NY.
Wicha, Max		Univ. of Michigan	Ann Arbor, MI.
Yarden, Yosef		Weizman Institute of Science	Rehovot, Israel
Yu, Ben		Henry Ford Health System	Michigan

Tumor Bank

From 8/11/98 until 9/30/98, we have sent out the following:

Cell Lines:	11 different samples
Human Mammary Epithelial Cells:	0 different samples
Frozen Cancer Cells:	0 different samples
Recipients:	4 different people

Date	Last Name	First Name	Institution	City	State	Country	Cells sent
8/11/1998	Noever	David	CyberChemics, Inc	Stony Brook	New York	USA	1 FA of 149,190
8/19/1998	Kallioniemi	Olli	National Center for Human Genome R	Bethesda	Maryland	USA	3 FI of 44
8/19/1998	Zajchowski	Deb	Berlex Biosciences	Richmond	California	USA	2 FI 102
8/28/1998	Claas	Andreas	German Cancer Research Center	Heidelberg	Germany	Germany	4 FI 159

Name	Date	H & E	Frozen Sections	Slides
Inmin Wu Children's Hospital	7/18/97	8		64
Inmin Wu Children's Hospital	8/22/97	10		80
Inmin Wu Children's Hospital	9/18/97	10		80
Inwin Wu Children's Hospital	10/28/97	10		80
Inmin Wu Children's Hospital	1/26/98	10		88
Inmin Wu Children's Hospital	4/23/98	10		80
Inmin Wu Children's Hospital	6/15/98	20		139
Richard Tamura Seattle Biomed	1/21/98	4	12	
Richard Tamura Seattle Biomed	6/24/98	4	24	
Richard Tamura Seattle Biomed	9/9/98	4	16	
Imad Shureiqui U/M	4/10/98		3	
Imad Shureiqui U/M	2/24/98	1	4	
Jay Vadgama	10/23/97	40		120
Donald McCallum U/M	10/8/97	1		6
George Prendergrast Wistar Institute	11/10/97	12	36	
Peter Bryant	9/11/97	24		96

Kevin Hoover University of California	8/11/97	9	27	
Kevin Hoover University of California	4/15/98	15		45
Anthony Raizis Christchurch School of Med	1/30/98	4	8	
Saeed Shiekh NIH	4/23/98	18	90	
Dr. Merajver U/M	4/27/98	7		42
Marietta Lee New York Medical College	5/14/98	20	30	30
Adam Brifsky Pittsburgh Cancer Institute	9/15/98	10	60	
TOTALS:		251	310	950